AMENDMENTS TO THE DRAWINGS:

Please re-order the drawing figures as indicated in the Replacement Sheets (9 sheets). Applicants have re-ordered Figs. 1–11, such that the drawing figures comply with 37 C.F.R. § 1.121(d). No amendments have been made to any of Figs. 1–11. Rather, Figs. 1–11 have be re-ordered to place them in a more appropriate sequence. Thus, no new matter has been added.

REMARKS

By this Amendment, Applicants have cancelled claims 38, 50, 51, 55, 67, and 68 without prejudice or disclaimer, and amended claims 37, 52–54, 69, 70, 72, and 75. No new matter has been added. Claims 37, 39–49, 52–54, 56–66, 69, 70, and 72–75 remain pending in this application.

I. Claim Rejections under 35 U.S.C. § 101

In the Office Action, claims 37-53, 72, and 73, were rejected under 35 U.S.C.§ 101 as purportedly being directed to non-statutory subject matter. Office Action at 3–4. Claims 37 and 72 are the only independent claims included in the rejection.

By this Amendment, Applicants have amended independent claims 37 to recite, *inter alia*, a "system architecture resident on a computer-readable storage medium for managing a communication network . . . ." Similarly, Applicants have amended independent claim 72 to recite, *inter alia*, a "computer program product resident on a computer-readable medium for storing instructions for execution by a processor . . . ." Applicants respectfully submit that the computer-readable storage medium recited in amended independent claims 37 and 72 complies with the statutory requirements of 35 U.S.C. § 101.

It is well established that "a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory."

M.P.E.P. § 2106.01(I) (citation omitted) (emphasis added). Moreover, "[w]hen functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of descriptive material to be realized." Id. at § 2106.01 (citation omitted).

For at least the reasons set forth in M.P.E.P. § 2106.01, Applicants respectfully submit that the "computer-readable medium," as recited in amended independent claims 37 and 72, comprises a tangible, functional element that is not a computer program product embodying functional descriptive material, and thus, claims 37 and 72 are in compliance with 35 U.S.C. § 101. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 37–53, 72, and 73 under 35 U.S.C. § 101.

II. Objection to the Drawings

In the Office Action, the drawings were objected to because "the sequence of drawings is not in order." Office Action at 4. By this Amendment, Applicants have re-ordered Figs. 1–11 to place the figures in a more appropriate sequence. The re-ordered figures have been incorporated into each of the attached "Replacement Sheet[s]" containing Figs. 1–11. Since none of Figs. 1–11 themselves have been amended, no new matter has been added.

The drawings were also objected to under 37 C.F.R. § 1.83(a) as purportedly failing to show every feature of the invention specified in the claims. Office Action at 5. Specifically, the rejection statement asserts that the following limitation was not shown

in the figures: "wherein at least one of the process executors receives instruction information, the at least one process executor being apt to modify its respective function based on the received instruction information, thereby changing the operation sequence of the at least one process executor and the base layer." Id. Although Applicants do not necessarily agree with the assertion, in order to promote the issuance of a Notice of Allowance for the present application, Applicants have cancelled the recited limitation from independent claims 37, 54, and 72.

For at least the above-outlined reasons, Applicants respectfully request reconsideration and withdrawal of the drawing objections.

III. Claim Rejections under 35 U.S.C. § 112

In the Office Action, claims 37–75 were rejected under 35 U.S.C. § 112, first paragraph, as purportedly failing to comply with the written description and enablement requirements. Office Action at 6. Claims 37–75 were also rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for purportedly failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Id. at 7. Specifically, the rejection statement asserts that the following limitation is not supported or enabled by the specification: "wherein at least one of the process executors receives instruction information, the at least one process executor being apt to modify its respective function based on the received instruction information, thereby changing the operation sequence of the at least one process executor and the base layer." Office Action at 6–7. Although Applicants do not necessarily agree with the assertion, Applicants have cancelled the identified limitation from independent

claims 37, 54, and 72. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 112, first and second paragraph, rejections of claims 37–75.

IV. Claim Rejection under 35 U.S.C. § 103(a)

In the Office Action, claims 37–74 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. App. Pub. No. 2002/0032769 to Barkai et al. ("Barkai US"), in view of EP 1150454 to Barkai et al. ("Barkai EP"). Office Action at 8–11. Of the claims listed in the rejection, claims 38, 50, 51, 55, 67, and 68 have been cancelled without prejudice or disclaimer, and claims 37, 39–49, 52–54, 56–66, 69, 70, and 72–74 remain pending. Of the pending claims, claims 37, 54, and 72 are the only independent claims listed in the rejection. Applicants respectfully submit that Barkai US and Barkai EP, regardless of whether they are viewed individually or as a whole, fail to disclose or render obvious all of the subject matter recited in independent claims 37, 54, and 72, or claims 39–49, 52, 53, 56–66, 69, 70, 73, and 74, which depend from a corresponding one of independent claims 37, 54, and 72. Therefore, Applicants respectfully submit that the Office Action fails to establish a *prima facie* case of obviousness with respect to the rejected claims.

A. Amended Independent Claim 37

By this Amendment, Applicants have amended independent claim 37, and Applicants respectfully submit that Barkai US and Barkai EP, taken alone or as a whole, fail to render amended independent claim 37 *prima facie* obviousness.

Amended independent claim 37 is directed to a system architecture resident on a computer-readable storage medium for managing a communication network, including,

inter alia, "a base layer for proxying . . . interfaces and for decoupling said interfaces from management functions . . . ; and a support layer superposed to said base layer and comprising a plurality of agents co-ordinating operation of said base layer in order to support distributed management functionalities, wherein said distributed management functionalities include FCAPS (Fault, Configuration, Accounting, Performance, Security) functionalities, wherein said agents are hosted on at least one machine, and said agents being movable among different machines, wherein said layers are adapted to perform respective functions based on respective instruction information provided to them, and a database is provided for storing said instruction information, the architecture being arranged for distributing said instruction information from said database to said layers." Barkai US and Barkai EP, taken alone or as a whole, fail to disclose or render obvious at least this subject matter recited in amended independent claim 37.

The rejection statement acknowledges that Barkai US "does not expressly disclose said base layer comprising distributed process executors in a distributed manner processes concerning management of said network, each process executor comprising at least one of a workflow engine, a rule engine, and a combination thereof; and wherein at least one of the process executors receives instruction information, the at least one process executor being apt to modify its respective function based on the received instruction information, thereby changing the operation sequence of the at least one process executor and the base layer." Office Action at 9. In an effort to remedy this acknowledged deficiency of Barkai US, the rejection statement asserts that Barkai EP discloses "a network management layer comprising distributed process

executors to execute in a distributed manner processes concerning management of said network, each process executor comprising a workflow engine (figure 3; [0042]-[0044], device components (DCs) are equivalent to distributed process executors comprising workflow engine, see figure 3 flowchart for workflow processed by device components (DCs); [0044], lines 20-25, "distributed algorithm"; [0042], lines 42-46 for network management." Id. The rejection statement further asserts that "it would have been obvious . . . to combine the method disclosed by Barkai_US with the method disclose by Barkai_EP regarding a network management layer comprising distributed process executors to execute in a distributed manner processes concerning management of said network, each process executor comprising a workflow engine," purportedly because "suggestion/motivation of the combination would have been to provide a system-wide top-down flow with each DC performing its independent computations which collectively achieve the external request . . . and to provide a distribute[d] algorithm in a bottom-up flow by propagating to other DCs which change their state and/or perform their part in the distributed system . . . ." Id. 10–11.

Applicants respectfully disagree with the rejection statement's assertions, and further, submit that regardless of these assertions, Applicants' amended independent claim 37 is not *prima facie* obvious based on Barkai US and Barkai EP. Barkai EP discloses a computer network management architecture, wherein a software and/or hardware "agent" is defined for each network element. Barkai EP at [0006]. Each decentralized network management unit hosts those agents that correspond to the portion of the network for which the network management unit is responsible. Id. Barkai EP additionally discloses that "each network element 102 may itself host its

agent and/or another device's autonomous agent." Id. at [0039]. While Barkai EP discloses agents hosted at different locations, at the decentralized network management unit and at the network element, Barkai EP fails to disclose the agent's ability to support all FCAPS functionalities and therefore being movable among, not merely hosted by, different machines.

Further, while Barkai EP discloses device components "receiv[ing] information from a corresponding one of the network elements . . . by polling the corresponding network element . . . [or] upon an event trap being triggered at the corresponding network element" (Barkai EP at [0013]-[0015]) and similarly, sending a "message to any other of the device components to which . . . [it] is logically interconnected" (id. at [0016]), Barkai EP fails to disclose both the device component and agent's ability "perform respective functions based on respective instruction information provided to them . . . [from] a database . . . storing said instruction information," as recited in Applicants' amended independent claim 37. Moreover, Barkai EP is silent with respect to the layers in the system architecture "being arranged for distributing said instruction information from said database to [the system] layers."

The device components Barkai EP merely identify "events," such as a fault or a provisioning request, and implement predetermined actions in response to these events. Barkai EP at [0044]. As shown in Fig. 3 of Barkai EP, in response to an event the device component merely implements a predetermined process to determine whether any actions need to be taken in response to the event. Id. The event occurrence identified in Barkai EP merely initiates a predetermined process of the

device component. It fails, however, to disclose instruction information for modifying the underlying function of architecture layer.

For at least these reasons, the prior art references fail to disclose or render obvious all of the subject matter recited in amended independent claim 37. Thus, Barkai US and Barkai EP, regardless of whether they are viewed individually or as a whole, fail to render amended independent claim 37 *prima facie* obvious. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of independent claim 37, and claims 39–49, 52, 53, and 73, which depend therefrom, based on Barkai US and Barkai EP.

B. Amended Independent Claim 54

Applicants' amended independent claim 54 is directed to a method of managing a communication network, including, *inter alia*, "executing, in [a] base layer, distributed processes concerning management of the network . . . ; supporting distributed management functionalities via a support layer . . . comprising a plurality of agents co-ordinating operation of said base layer; including FCAPS (Fault, Configuration, Accounting, Performance, Security) functionalities as said distributed management functionalities; hosting at least part of said agents on different machines; moving said agents among different machines; performing in each said layers, functions based on said instruction information; providing a database for storing said instruction information for each of said layers; [and] distributing said instruction information from said database to each respective layer . . . ." For reasons at least similar to those outlined above with respect to amended independent claim 37, Applicants' amended independent claim 54

is patentably distinguishable from Barkai US and Barkai EP. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of amended independent claim 54, and claims 56–66, 69, 70, and 74 that depend therefrom.

C. Amended Independent Claim 72

Applicants' amended independent claim 72 is directed to a computer program product resident on a computer-readable medium for storing instructions for execution by a processor, the instructions performing a method of managing a communication network, the method including, *inter alia*, "providing a database for storing . . . instruction information for each of [a base layer and a support layer] . . . ; distributing said instruction information from said database to each respective layer; and receiving instruction information in each of said layers; and performing in each of said layers, functions based on said instruction information." For reasons at least similar to those outlined above with respect to amended independent claim 37, Applicants' amended independent claim 72 is patentably distinguishable from Barkai US and Barkai EP. Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of amended independent claim 72.

D. Amended Claim 75

Applicants' amended claim 75 is directed to a system comprising, "a network including network equipment, and a management system architecture according to any one of claims 37, 39–49, 52, 53, and 73 for managing said network." For reasons at least similar to those outlined above with respect to amended independent claim 37,

Applicants respectfully submit that amended claim 75 is patentably distinguishable from Barkai US and Barkai EP.

V. Conclusion

For at least the reasons set forth above, independent claims 37, 54, and 72, should be allowable. Dependent claims 39–49, 52, 53, 56–66, 69, 70, 73, and 75 each depend from at least one of allowable independent claims 37 and 54. Therefore, each of those dependent claims should be allowable for at least the same reasons as the corresponding independent claims, as well as by virtue of their additional recitations of novel and non-obvious subject matter.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application, withdrawal of the claim rejections, and timely allowance of pending claims 37, 39–49, 52–54, 56–66, 69, 70, and 72–75.

If the Examiner believes that a telephone conversation might advance prosecution of this application, the Examiner is cordially invited to call Applicants' undersigned attorney at (404) 653-6559.

Applicants respectfully submit that the Office Action contains a number of assertions concerning the related art and the claims of the present application. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 19, 2009

By: /Christopher T. Kent/
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